Abstract

The aim of this thesis is to check the quality of weather data at an arctic weather station at the Kongsvegen glacier on Svalbard, Norway. For this purpose a quality control process is developed, that incorporates a variety of different tests. Some of these tests are based on prevalent methods in meteorology, while others offer a unique approach to fit the special needs of the dataset. The tests are divided into steps, on which the final procedure is performed, where each step is supposed to identify a different kind of error. The quality tests manage to identify a broad array of problems, which includes a 24-hour time shift during the period of 2004/2005, a large number of spike errors, variability errors, and rough errors, as well as distribution gap errors, spatial and internal consistency errors. The results of this work are considered as a basic step towards development of an even more sophisticated QC method.